

## MISCELLANEOUS NOTES

### 1. NEW RECORDS OF TOMB BAT (CHIROPTERA: EMBALLONURIDAE) FROM BIHAR WITH SOME ECOLOGICAL REMARKS

#### INTRODUCTION

During a recent field survey in South Bihar, I collected two species of Tomb Bats, *Taphozous melanopogon melanopogon* Temminck and *Taphozous kachhensis kachhensis* Dobson not recorded earlier from Bihar.

All measurements are in mm and the figures in parentheses represent average measurements. Abbreviations used in the text are: *f*: length of forearm; *t*: length of tibia; *ft*: length of foot including claws; *l*: total length of skull; *zw*: zygomatic width; *cw*: cranial width; *m<sup>3</sup>-m<sup>3</sup>*: maxillary width; *c-m<sup>3</sup>*: length of upper tooth row; *c-m<sub>3</sub>*: length of lower tooth row; *ml*: length of mandible.

#### OBSERVATIONS

##### 1. *Taphozous melanopogon melanopogon* Temminck.

*Material*: Patna Dist.—Patna City: Govind Bag Mandir, 18.vii.1977 and 15.viii.1977, 7 ♂♂, 10 ♀♀; Raja Ghat, 15.viii.1977, 3 ♂♂.

*Measurements*: 10 ♂♂: *f*., 63-66.1 (64.4); *t*., 23.6-25.2 (24.6); *ft*., 13-14.3 (13.7). 19 ♀♀: *f*., 62-67.3 (65.4); *t*., 24-25.6 (24.5); *ft*., 13-15.2 (14.2).

*Skull*.—8 ♂♂: *l*., 20.5-21.4 (20.9); *zw*., 12.7-13.8 (13.1); *cw*., 10.3-10.5 (10.4); *m<sup>3</sup>-m<sup>3</sup>*., 8.7-9.6 (9.3); *c-m<sup>3</sup>*., 9-9.6 (9.3); *c-m<sub>3</sub>*., 9.7-10.3 (10); *ml*., 16.1-17.1 (16.6). 2 ♀♀: *l*., 21, 21.2; *zw*., 13.1, 13.1; *cw*., 10.3, 10.5; *m<sup>3</sup>-m<sup>3</sup>*., 9, 9.6; *c-m<sup>3</sup>*., 9, 9; *c-m<sub>3</sub>*., 9.5, 9.7; *ml*., 16.1, 16.5.

*Distribution*: Java, Malaysia; Sumatra; Kalimantan; Laos; Vietnam; Burma; China; Peninsular India; and Sri Lanka.

In India this species is hitherto known from Kerala, Karnataka, Maharashtra, Madhya

Pradesh, Gujarat and Andaman Islands. The present collection from Bihar extends the range of distribution further northeast in India.

#### *Observations.*

*General*: It is obvious from the measurements that the forearm in the female is slightly longer than in the male as given by Sinha (1970). Against the statement of Dobson (1876) that the black beard develops only in breeding season, I have found among 10 males, collected in July, 6 had black beard and the rest had no sign of beard. Brosset (1962) reports the breeding season for this species as January to May and according to him even subadult males possess beard. Among 9 females collected during July, 3 have a pair of prominent pectoral teats.

*Habit and habitat*: Two types of colonies of this bat were observed in Patna City. One mixed colony of both sexes (*c.* 500 exs.; sex ratio of collected specimens is 2: 3) was found in a dark and discarded room of Govind Bagh temple and other (of seven males only) on the roof of a semidark entrance to Rajaghat. No other bats were found in association with this bat as was observed by Brosset (1962) in Kanheri Badami and Ellora (Maharashtra). No ectoparasites were seen on the body.

A cat was seen with a *Taphozous melanopogon* in its mouth on the verandah of the temple.

##### 2. *Taphozous kachhensis kachhensis* Dobson

*Material*: Gaya Dist.: Bodh Gaya, 22.vii.1978, 1 ♂ (Subad.); Rohtas Dist.: Sasaram, 27.x.1978, 1 ♀.

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Measurements: 1 ♂: *f.*, 69.2; *t.*, 28; *ft.*, 18. 1 ♀: *f.*, 74; *t.*, 32; *ft.*, 17.5.

Skull.—1 ♂: *l.*, 25.5; *zw.*, 15; *cw.*, 11.8;  $m^3m^3$ , 10.6;  $c-m^3$ , 11.3;  $c-m_3$ , 13; *ml.*, 20.4.

Distribution: Pakistan and India.

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the collection of the Indian Museum, Calcutta. Taylor & Francis, London.

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## 2. OBSERVATION OF HOMOSEXUAL BEHAVIOUR IN ASIATIC LION *PANTHERA LEO PERSICA*

Homosexual behaviour has been observed in male African lions. (Schaller 1972). There is no record of homosexual behaviour of the females in Africa or India.

I observed homosexual behaviour in two adult lionesses on three occasions, in Raidi & Vaniavav areas in the Gir Wildlife Sanctuary of Western India. Both the lionesses were adult, over 15 years in age. For convenience, I will call them lioness 'A' and lioness 'B'.

These two lionesses were observed mostly together. Lioness 'A' was in estrous and one young male of 5 to 6 years was courting her. One day later lioness 'B' also came into estrous and started following 'A'. The same male started mating with lioness 'A' and their matings continued only for two days. All this time lioness 'B' kept fairly close to the mating couple. Whenever lioness 'B' came closer, the male chased her away. On

the third day of the mating, the male seemed to be tired, and kept resting most of the time, Lioness 'A', apparently not satisfied sexually, continued to present herself to the male and when he did not respond, she went upto him and nudged him with head between his two hindlegs, sometimes even partly lifting him from behind. At this the male would move over to another place.

On the fourth day when lioness 'A' was posturing for the male to mount, lioness 'B' came and mounted her with same actions as that of male including neck biting, growling and later on rolling on its back. Then the females switched positions with lioness 'B' mounting lioness 'A'. This was repeated once on the same day and once on the fifth day. All this time the male was also close, apparently indifferent to the females.